

REMARKS

I. Introduction

Claims 11, 12, 14, 16-23, and 26 are pending in the present application. For at least the reasons set forth below, Applicants submit that the pending claims are in condition for allowance.

II. Rejection of Claims 11, 12, 14, 16-23, and 26 under 35 U.S.C. §112, ¶1

Claims 11, 12, 14, and 16-23 stand rejected under 35 U.S.C. §112, ¶1 as failing to comply with the enablement requirement. Claim 26 stands rejected under 35 U.S.C. § 112, ¶1 as containing new matter (i.e., “subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention”).

With regard to claims 11 and 19, the Examiner believes that the specification does not adequately describe “performing an error diagnosis of software running on the other components” and “allowing a remote diagnosis of the other components of the distributed system to be carried out, wherein the remote diagnosis includes testing at least one of the other components.” Specifically, the Examiner objects to (1) “not mentioning any steps to be carried out regarding the test” and (2) that “it [is] unclear . . . how the remote diagnosis and testing are indeed different from each other.”

As regards the first objection, as set forth in Applicants’ Amendment dated July 23, 2008, one of ordinary skill in the art would be able to implement the claimed subject matter without undue experimentation. Component diagnosis/testing is known in the art and dependent on the specific device being diagnosed/tested. The invention is not “performing an error diagnosis” in-and-of-itself, but rather the entire claimed subject matter. To that end, the “performing an error diagnosis” is in accordance with the specific implementation of the invention, but a diagnosis/testing itself for any particular implementation would be understood by one of ordinary skill in the art, without having to perform undue experimentation.

Though Applicants appreciate the obviously extensive efforts that have been made to provide detailed responses, Applicants respectfully point out that MPEP § 2164.04 states that “the examiner should specifically identify what information is missing **and why one skilled in the art could not supply the information without undue experimentation** . . . [and], specific technical reasons are always required.” (Emphasis added) (*See* MPEP § 2164.01(a)

Undue Experimentation Factors). The Examiner states that, “by not mentioning any steps to be carried out regarding the test, one having ordinary skill in the art would not understand, and therefore would not be able to perform, the manner for testing.” However, device testing is thoroughly understood by people of ordinary skill in the art. As already mentioned, the specific steps required for a test depend on the specific component being tested, but there is no reason “why one skilled in the art could not supply th[at] information without undue experimentation.”

As regards the second objection, claims 11 and 19 provide are clear with regard to the feature of “allowing a remote diagnosis of the other components of the distributed system to be carried out, wherein the remote diagnosis includes testing at least one of the other components.” It is quite clear that “testing . . . other components” is part of (e.g., a subset of) “a remote diagnosis of the other components.” This is consistent with the cited portion of the specification that recites “service element 2 allows a service provider to carry out **a remote diagnosis** of the individual components, using communication means 4. This service provider **can then test** the individual components directly, using communication means 4 and service element 2.” Specification at pg. 5, lines 15-17 (emphasis added). Moreover, it is understood from the plain meaning of the terms that testing is a subset of carrying out remote diagnosis. To perform a diagnosis means to identify the nature or cause of a phenomenon. A step in performing such identification may include performing a test.

For at least these reasons, claim 11 and 19, as well as their dependent claims, should be allowed, and the enablement rejection withdrawn.

Claim 26 was rejected under § 112 as assertedly including new matter. Claim 26 recites “the operations of: [1] automatically, and at predefined intervals, performing an error diagnosis of software running on the other components; [2] for each of a first subset of errors diagnosed in the error diagnosis step, repair the error; and [3] for each of a second subset of errors diagnosed in the error diagnosing step, contact a provider and allow the provider to responsively remotely repair the error.” The Examiner states “that the service element (i.e. processing device disposed in the motor vehicle) can both repair errors and, if an error is obtained that cannot be repaired, contact a provider and allow the provider to responsively remotely repair the error.” Office Action of 10/29/08 at pages 6-7. However, the Examiner objects because page 5, lines 13 to 15 of the Substitute Specification assertedly “indicates that it is the service provider that carries out a remote diagnosis and does not support a local

error diagnosis by the on-vehicle processing device nor that the diagnosis is an error diagnosis of software.” *Id.* at page 7.

To the contrary, the Specification provides clear support for these features. In this regard, page 2, lines 13 to 30 of the Substitute Specification states:

In addition, it is advantageous that **the service element** of the present invention subjects the **software running on the components of the distributed system to an error diagnosis** and possibly corrects this software. In this manner, the available software is checked for errors by the user and, if necessary, is repaired. This saves the user a considerable amount of time.

... **Furthermore**, it is advantageous that the service element of the present invention allows **a service provider** to perform **a remote diagnosis** of faulty components, if the service element itself can no longer carry out a correction. This advantageously frees the user from contacting an external service in response to a fatal error, in order to eliminate this error. This considerably reduces expenditure.

The disclosed feature of “a service provider to perform a *remote* diagnosis” does not preclude “the service element . . . [performing] an error diagnosis. . .” Additionally, as disclosed in the above quoted section, the service element may diagnose software running on the other components. Further, a first subset of errors is repaired by the service element and a second subset of errors causes communication with the provider for a remote repair. It is clear from this section that Applicants, “at the time the application was filed, had possession of the claimed invention,” as recited in claim 26.

For at least this reason, claim 26 does not contain new matter, and the rejection should be withdrawn.

III. Rejection of claims 11-12, 14, 17-20 and 23 under 35 U.S.C. §103(a)

Claims 11-12, 14, 17-20 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,370,449 to Razavi (“Razavi”) in view of U.S. Patent No. 6,512,968 to de Bellefeuille et al. (“de Bellefeuille”). It is respectfully submitted that none of claims 11-12, 14, 17-20 and 23 is obvious over Razavi in view of de Bellefeuille, for at least the following reasons.

Claims 11 and 19, as well as their dependent claims, should be allowed because neither Razavi nor de Bellefeuille disclose the feature of “performing an emergency function.” The Office Action refers to col. 1, lines 41-46 and col. 7, lines 54-63 of Razavi as assertedly

disclosing this feature. However, col. 1, lines 41-46, the “background” section of Razavi that discusses traditional automobile design, recites: “designers may also incorporate into the vehicle the delivery of services that may assist the driver, thereby reducing the driver’s workload and anxiety level. Such services may include providing computerized maps, navigation aids and emergency assistance signaling.” First, this does not disclose “**a processing device** disposed in the motor vehicle and adapted **to perform** operations including the operations of: . . . performing an emergency function.” Since this section discusses “traditional” automobile designs, and does not further elaborate on “emergency function,” the disclosure is likely referring to simple hazard signal lights, which does not require any processing device adapted to perform operations including performance of an emergency function. In any event, it does not identically disclose “**a processing device . . . to perform . . . an emergency function.**” Second, even if one assumed that this did disclose “performing an emergency function,” it does not form any part of any embodiment of Razavi. In this hypothetical case, it would actually teach away from the combination, because while Razavi discusses emergency assistance signaling in the background section, Razavi, nevertheless, omits any such feature from the embodiments of the Razavi disclosure. As for col. 7, lines 54-63, this section has absolutely nothing to do with “performing an emergency function,” and merely discloses text-to-speech and computerized maps.

Claims 11 and 19, as well as their dependent claims, should be allowed because neither Razavi nor de Bellefeuille disclose the feature of “a processing device disposed in the motor vehicle and adapted to perform operations including the operations of: configuring the other components; maintaining the other components; . . .” The Office Action asserts that Razavi discloses a service element that maintains other components and de Bellefeuille discloses that maintenance may include performing an error diagnosis. Specifically, the Office Action asserts that col. 6, lines 9-17 and col. 8, lines 50-67 of Razavi discloses a service element that maintains other components. The “Examiner asserts that Razavi discloses a service element that is the central component of the in-car sub-network that handles the processing and programming functions of the other components on the network.” Office Action at page 26. First, this characterization of these sections of Razavi makes no mention of “maintaining,” just as the sections themselves makes no mention of “maintaining.” Additionally, even if “processing and programming” identically disclosed “maintaining,” these sections of Razavi simply do not disclose “processing and programming.” Col. 6, lines 9-17 merely states that all devices are either directly or

indirectly plugged into the compute platform. This neither states nor implies that the compute platform “handles the processing and programming functions of the other components.”¹ Further, col. 8, lines 50-67 merely identifies JVM as the execution environment for the compute platform. This may disclose that any application running on the compute platform will run in Java, but does not disclose the compute platform processing, programming, or maintaining the connected devices.

Nowhere in these two sections of Razavi, nor any section of Razavi, is “a processing device disposed in the motor vehicle and adapted to perform operations including the operations of: configuring the other components; maintaining the other components; . . .” disclosed. For example, at Razavi col. 2, lines 14 to 15, “re-configuring and upgrading of the vehicle” is disclosed. However, this discloses upgrading the overall vehicle by interchanging parts, and not upgrading (or otherwise maintaining) those parts. Razavi at col. 3, lines 33-37 likewise discloses upgrading the vehicle by exchanging devices, and not upgrading (or otherwise maintaining) the devices. Razavi at col. 5, lines 26-29 discloses that the system “allows new components or new software to be added to the automobile sub-network and thereby enables new services to be provided to the driver.” However, this again does not disclose “a processing device disposed in the motor vehicle and adapted to perform operations including the operations of: configuring the other components; maintaining the other components; . . .” “New components” again refers to the exchange of devices connected to the network, and “new software” may refer to any number of things, and does not disclose any particular device “maintaining” other components with “new software.” For example, Razavi at col. 10, lines 26-31 discloses that “server 53 allows the services which are provided to be upgraded or otherwise modified, whereas services provided by many embedded servers are ‘hard wired’ into them, thereby limiting their capabilities and their upgradeability.” Here, as in the last cited section of Razavi, the “upgrading” is being performed on the central component, and not on the “other components.”

Of the many references in Razavi to upgrading, replacing, re-configuring, or otherwise performing a task that might be construed as “maintaining” or “configuring” the other components (i.e. the four examples provided above); only *one* reference is made to “upgrading” an existing connected device (i.e. other than the central device). Razavi at col.

¹ For example, all computers on a network are connected to some number of switches/routers, but the switches/routers do not perform the processing for the computers, do not perform the programming for the computers, and do not perform “maintenance” on the computers.

13, lines 54-64 recite “components which execute associated software, display data or provide services can be upgraded by downloading new software, data or services (‘upgrade data’) to the components through the in-car sub-network. . . The software can be retrieved by one device (e.g., a wireless modem,) conveyed through the network and installed in a second device (e.g., a GPS locator) . . .” However, there is absolutely no mention of what device does the “install[ing] in a second device.” The compute platform 22 (i.e. the alleged processing device of claims 11 and 19) is not mentioned anywhere in this section. Further, if it is argued that earlier disclosure indicates that the modem and GPS must both be connected to the compute platform, Razavi still fails to disclose the present features for at least two reasons. First, Razavi states that devices are connected to the compute platform directly or via a network (e.g., Ethernet). Therefore, the GPS may be directly connected to the modem, indirectly connected to the compute platform via a network, and perform this “upgrade” directly with the modem (i.e. with no involvement from the compute platform). Second, even if one assumes all devices are directly connected to the compute platform, Razavi only recites “conveyed through the network.” Conveying data is the function of a switch or router, and does not constitute “maintaining” or “configuring” the device to which data is merely conveyed.

As illustrated above, in great detail, though several places in Razavi disclose “upgrading,” absolutely no section discloses “a processing device disposed in the motor vehicle and adapted to perform operations including the operations of: configuring the other components; **maintaining the other components**; . . .” De Bellefeuille does not, and was not asserted as disclosing this feature, and for at least these reasons the combination of de Bellefeuille and Razavi fails to identically disclose each feature of claims 11 and 19. Therefore, claims 11 and 19, as well as their dependent claims, should be allowed.

In this regard, it is noted that claims 11 and 19 provides a novel step-wise approach to component maintenance, by providing a service element in a distributed system to handle initial maintenance and testing of other components of the distributed system and that also provides further remote diagnosis, e.g., where the service element is unable to perform the diagnosis.

For at least the foregoing reasons, Razavi in view of de Bellefeuille does not render claims 11 and 19 obvious. Claims 12, 14, 17-18, and 20, and 23 depend from one of claims 11 and 19; accordingly, the subject matter of these claims are not obvious over Razavi in view of de Bellefeuille for at least the same reasons.

Withdrawal of this rejection is therefore respectfully requested.

IV. Rejection of claim 16 under 35 U.S.C. §103(a)

Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Razavi in view of de Bellefille and further in view of U.S. Patent No. 6,330,499 (hereinafter referred to as “Chou”). Claim 16 depends from claim 11 and as discussed above, Razavi and de Bellefille do not describe or suggest all of the features of claim 11. Additionally, Chou has not been asserted to, and does not, overcome the deficiencies of the Razavi / de Bellefille combination. Therefore, for at least the reasons stated above, Applicants request withdrawal of the present rejection.

V. Rejection of claim 21 under 35 U.S.C. §103(a)

Claim 21 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Razavi in view of de Bellefille and further in view of U.S. Patent No. 5,465,207 (hereinafter referred to as “Boatwright”). Claim 21 depends from claim 14 and as discussed above, Razavi and de Bellefille do not describe or suggest all of the features of claim 11. Additionally, Boatwright has not been asserted to, and does not, overcome the deficiencies of the Razavi / de Bellefille combination. Therefore, for at least the reasons stated above, Applicants request withdrawal of the present rejection.

VI. Rejection of claim 22 under 35 U.S.C. §103(a)

Claim 22 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Razavi in view of de Bellefille and further in view of U.S. Patent No. 5,964,813 (hereinafter referred to as “Ishii”). Claim 22 depends from claim 11 and as discussed above, Razavi and de Bellefille do not describe or suggest all of the features of claim 11. Additionally, Ishii has not been asserted to, and does not, overcome the deficiencies of the Razavi / de Bellefille combination. Therefore, for at least the reasons stated above, Applicants request withdrawal of the present rejection.

VII. Rejection of claim 26 under 35 U.S.C. §103(a)

Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Razavi in view of de Bellefille, in view of Chou, and further in view of Ishii.

Claim 26 recites features substantially similar to the above argued features of claims 11 and 19, for which the combination of Razavi and de Bellefille are insufficient. Since neither Chou, nor Ishii cure those deficiencies, and were not asserted as curing those deficiencies, claim 26 should be allowed.

VIII. Rejection of claims 11-12, 14, 16-21 and 23 under 35 U.S.C. §103(a)

Claims 11-12, 14, 16-21 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,185,491 (hereinafter referred to as “Gray”) in view of U.S. Patent No. 6,246,935 (hereinafter referred to as “Buckley”) and further in view of Chou. It is respectfully submitted that none of claims 11-12, 14, 16-21 and 23 is obvious over Gray in view of Buckley, and in view of Chou, for at least the following reasons.

Each of claims 11 and 19 recites, inter alia, the following:

performing an error diagnosis of software running on the other components, and, if the software on one of the other components has an error, correcting that software;

The Office Action asserts that Gray discloses a service element that maintains other components and that Buckley discloses the precise error diagnosis of claims 11 and 19. However, nowhere does Gray disclose a service element that maintains other components as provided for in the present claims. For example, the Office Action refers to col. 4, line 65 to col. 5, line 21 of Gray as disclosing a service element that performs upgrading and maintenance of other components on a distributed system to which the service element belongs. However, neither this section, nor any section of Gray, discloses a service element that maintains other components. What Gray does disclose is a vehicle control center that is connected to one or more devices. In order for the vehicle control center to “control” a new device that is connected to the vehicle control center, the vehicle control center needs an “interface” for that device. “In the simplest implementation, illustrated [in FIG. 5], a memory device such as ROM 510 stores information about the device and in addition, in one embodiment, contains a plurality of JavaBeans 520 **for uploading to the vehicle control center over bus 120.**” Gray at col. 4, lines 23-31 (emphasis added). The “Examiner asserts that Gray explicitly discloses upgrading/maintaining the interfaces of the other components

by receiving software upgrades/updates via a port of the vehicle control center and, as such, the vehicle control center (i.e. service element) in Gray performs the operation of maintaining the other components, specifically” col. 4, line 65 to col. 5, line 21, which recites with emphasis added:

As an alternative to storing a control bean 750 and a GUI bean 760 or other beans associated with the standard device interface 740, the memory device or ROM may store a network address such as a uniform resource locator (URL) from which the appropriate manufacturer's interface may be downloaded. This permits the manufacturer to update a user interface on a dynamic basis and ensure that the most recent version of the manufacturer device interface is downloaded when a device is installed. *This also reduces the ROM space required for storing the manufacturer's interface information and reduces the cost of the attached end device.*

One should note that there are a number of ways in which the standard device interfaces or custom **interfaces can be installed in the vehicle control center**. They can be pre-installed in the vehicle control center when it is installed in the vehicle. Additionally, they can be requested and downloaded from the attached devices as described more hereinafter. They can be loaded from a diskette, CDROM, EPROM or other memory medium into the vehicle control center. They can be received over a network link from a URL address which address is either downloaded from the attached device or entered manually, and they can be input over an I/O link, such as an infrared port to the vehicle control center

FIG. 5 refers to **uploading** the device interface stored in ROM 510 to the vehicle control center, and FIG. 7 contrasts that by referring to storing a URL for the interface location instead of the interface, so that the vehicle control center can upload the URL from the device and download the interface from the location specified by the URL. This says nothing about downloading the interface to the device, and in fact, merely discloses the vehicle control center downloading the interface, to “be installed **in the vehicle control center**.” Additionally, Gray states that the URL embodiment “**reduces** the ROM space required for storing the manufacture’s interface information.” In FIG. 5, the ROM is described at storing the interface (i.e., to upload to the vehicle control center), and, in FIG. 7, the ROM is described as storing a URL (i.e., indicating where the vehicle control center may retrieve the interface). Presumably, the URL is smaller in size than the interface and thus Gray states that FIG. 7 “**reduces** the ROM space required.” However, if, as the Examiner contends, the URL is uploaded to the vehicle control center so that the vehicle control center can download the interface, only to further download the interface to the device (a step

wholly absent from the disclosure), then the ROM would require **more** storage space than a ROM that only held the interface.

FIG. 10A-D further support this, illustrating the vehicle control center with an A interface and a B interface, attached to device A and device B. Device C, which stores interface C, is connected to the bus, and responsive to a request, **uploads** interface C to the vehicle control center. This is again illustrated in FIG. 11A, 11B, and 12. Nowhere in Gray does the vehicle control center, nor any other device, download to the “other components” a new interface. The only thing sent to the components is a request for an **upload**. See Gray col. 4, line 65 to col. 5, line 21, as cited in the Office Action.

Thus, the system of Gray in view of Buckley, and in view of Chou, does not disclose or suggest all of the features of either of claims 11 and 19.

Each of claims 11 and 19 also recites, inter alia, the following:

allowing a remote diagnosis of the other components of the distributed system to be carried out, **wherein the remote diagnosis includes testing** at least one of **the other components**;

As regards this feature, neither Gray nor Buckley disclose “the remote diagnosis includes testing at least one of the other components.” Instead, the Examiner relies on Chou at col. 3, lines 15-31 and col. 5, lines 34-35. However, the remote service center 200 (including diagnostic server 201) is thoroughly discussed at Chou col. 5, line 33 to col. 6, line 47, and does not mention “wherein the remote diagnosis includes testing at least one of the other components.” “Diagnostic server 201 [may have] access to data related to the vehicle such as as-built, history, diagnostics, warranty, service information and failure mode data.” (Chou, col. 5, lines 35-37.) The section goes on to further describe data collection and modeling, but nowhere does Chou disclose a “remote diagnosis include[ing] **testing** at least one of the **other** components.”

For at least the foregoing reasons, it is respectfully submitted that the combination of Gray, Buckley and Chou does not render obvious claims 11 and 19. Also, claims 12, 14, 16-18, and 20-21, and 23 depend from one of claims 11 and 19, so that the subject matter of these claims is also not rendered obvious.

Withdrawal of this rejection is therefore respectfully requested.

IX. Rejection of claims 22 and 26 under 35 U.S.C. §103(a)

Claims 22 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gray in view of Buckley, Chou and U.S. Patent No. 4,866,713 (hereinafter referred to as “Worger”).

Claim 22 depends from claim 11 and as discussed above, Gray, Buckley and Chou do not describe or suggest all of the features of claim 11. Worger does not cure the deficiencies of Gray, Buckley and Chou (nor has it been relied on for such).

Claim 26 recites features substantially similar to the above argued features of claims 11 and 19, for which the combination of Gray, Buckley, and Chou are insufficient. Since Worger does not cure those deficiencies, and was not asserted as curing those deficiencies, claim 26 should be allowed.

Therefore, for at least the reasons stated above, Applicants request withdrawal of the present rejection.

X. Conclusion

In light of the foregoing, Applicants respectfully submit that all of the pending claims 11-12, 14, 16-23, and 26 are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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Dated: January 23, 2009

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